

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Please amend the claims as follows:

1-14. (Canceled).

15. (Currently Amended) A device, comprising:

a coolant;

a first structure having a first thermal resistance and including particles of a first size having an average diameter greater than about 50 μm to convert some of the coolant from liquid to vapor;

a second structure around the first structure to wet the first structure with the coolant from multiple sides and having a second thermal resistance that is greater than the first thermal resistance and including particles of a second size, the second size is less than the first size; and

a plurality of outer walls to enclose the coolant, the first structure, and the second structure in an air tight manner.

16. (Original) The device of claim 15, wherein the average diameter of the particles is less than about 500 μm .

17. (Canceled).

18. (Original) The device of claim 15, wherein the second structure includes a wire mesh, sintered particles, fibers, or axial grooves.

19. (Original) The device of claim 15, wherein a top surface of the second structure extends beyond a top surface of the first structure by an amount sufficient to ensure pooling of the coolant on the top surface of the first structure.
20. (Currently Amended) A system, comprising:
a heat pipe, including:
a boiling structure including particles of a first size having a first thermal resistivity, and
a wick structure around a perimeter of the boiling structure including particles of a second size, the second size is less than the first size, and having a second thermal resistivity that is significantly greater than the first thermal resistivity; and
a fan to move air across at least a portion of the heat pipe.
21. (Original) The system of claim 20, wherein the boiling structure includes particles having an average diameter of about 300 μm .
- 22-24. (Canceled).
25. (Previously Presented) A device, comprising:
a boiling structure formed of a first porous material to convert a coolant from liquid to vapor and having a first thermal resistance; and
a wick structure formed of a second porous material surrounding the boiling structure to bring the coolant to the boiling structure and having a second thermal resistance that is higher than the first thermal resistance of the boiling structure.
26. (Previously Presented) The device of claim 25, wherein boiling structure includes particles having an average diameter greater than about 50 μm .
27. (Previously Presented) The device of claim 26, wherein the average diameter is less than about 500 μm .

28. (Currently Amended) The device of claim 25, the boiling structure having at least one side and a top, wherein the wick structure surrounds the boiling structure on all sides and does not extend over ~~a~~ the top of the boiling structure.

29. (Previously Presented) The device of claim 25, wherein a top surface of the wick structure extends above a top surface of the boiling structure by about 0.1 mm or greater.

30. (Previously Presented) The device of claim 25, wherein the first thermal resistance is about 0.1 °C/W for a 1 cm² area.

31. (Previously Presented) The device of claim 26, wherein the particles include copper.

32. (Previously Presented) The device of claim 25, wherein the wick structure includes a wire mesh, sintered particles, fibers, or axial grooves.

33. (Previously Presented) A heat pipe, comprising:
a boiling structure formed of a porous material;
a wick formed of another porous material surrounding all sides of the boiling structure and having a lower capacity for heat transfer per unit area than the boiling structure; and
a casing enclosing the boiling structure and the wick.

34. (Previously Presented) The heat pipe of claim 33, wherein the boiling structure has a mean feature size greater than about 50 μm.

35. (Previously Presented) The heat pipe of claim 33, wherein a top surface of the wick extends beyond a top surface of the boiling structure.

36. (Previously Presented) The heat pipe of claim 33, wherein a thermal resistivity of the boiling structure is less than about $0.1\text{ }^{\circ}\text{C-cm}^2/\text{W}$.

37. (Previously Presented) The heat pipe of claim 33, wherein a thermal resistivity of the wick is greater than about $0.1\text{ }^{\circ}\text{C-cm}^2/\text{W}$.

38. (Previously Presented) The heat pipe of claim 33, wherein the boiling structure, the wick, and the casing include copper.